

PROJECT NAME: Lignin-to-Biofuel for Gasoline Compounds

RECIPIENT: Alliant Techsystems, Inc.

LOCATION: Magna, UT

PURPOSE: Lignin is a complex chemical compound derived from the secondary cell walls of plants and some algae. Lignin is a long-recognized source for large amounts of alternative fuel, and the second most abundant biomass feedstock. Specifically, lignin is a rich source of hydrocarbons, including aromatic hydrocarbons, which are key to high performance gasoline and not common in other renewable fuels. While it is still difficult to economically both breakdown and partially deoxygenate the lignin, this situation may change soon. Large quantities of lignin at low costs are anticipated as a byproduct of a large number of new cellulosic ethanol production plants (up to 300) to be built in the U.S. in the next decade.

Researchers at the University of Utah (U of U) have demonstrated, on a small scale, technology needed to process lignin into compounds for gasoline and other fuels. Lignin BioFuels, LLC (LBF) is working with the U of U to commercialize this technology. Recently, ATK used its own in-house testing to verify the U of U-LBF technology. ATK, utilizing its expertise in chemical production, is assisting the team in scaling up the technology to optimize output, to make it economically viable, and to lay the groundwork for larger-scale production.

AMOUNT: \$2,355.5 M